

Erratum:

Nicholas D. Alikakos and Peter W. Bates,
Estimates for the Eigenvalues of The Jordan Product of Hermitian
Matrices, *Linear Algebra Appl.* 57:41–56 (1984)

An incorrect statement regarding a result due to Professor G. Strang was made in this paper. Specifically we stated that the lower bound obtained in [1] for the eigenvalues of $AB + BA$, when A and B are Hermitian and positive semidefinite, is sharp only when the matrices resemble projections. If a_1, a_n, b_1, b_n stand for the maximal and minimal eigenvalues A, B and k_a, k_b for the ratios $a_1/a_n, b_1/b_n$, respectively, then Strang has shown that the minimum eigenvalue of the Jordan product is not less than $2a_nb_n$ when

$$k_b \leq \frac{k_a + 3}{k_a - 1}$$

and not less than

$$\frac{a_nb_n[16k_ak_b - (k_a - 1)^2(k_b - 1)^2]}{4(k_a + 1)(k_b + 1)}$$

when the reverse inequality holds. Moreover, this combined lower bound is best possible.

REFERENCES

- 1 W. Gilbert Strang, Eigenvalues of Jordan products, *Amer. Math. Monthly* 37–40 (1962).